

REMARKS

This is in full and timely response to the Office Action mailed on June 29, 2006.

Reexamination in light of the following remarks is respectfully requested.

Claims 1 and 3-16 are present within the above-identified application, with claims 1, 11, and 12 being independent.

No new matter has been added.

Rejoinder

Paragraph 2 of the Office Action indicates that claims 12-18 have been withdrawn from consideration as being drawn to a non-elected invention.

Rejoinder of claims 12-18 is respectfully requested.

Rejection under 35 U.S.C. §112, second paragraph

Paragraph 3 of the Office Action indicates a rejection of claims 1, 8, and 11 under 35 U.S.C. §112, second paragraph.

In response to this rejection, please hold this rejection in abeyance at this time until the other art rejections have been overcome.

At that stage, an appropriate response may be addressed if still deemed necessary by the Examiner.

Rejection under 35 U.S.C. §103

Paragraph 5 of the Office Action indicates a rejection of claims 1, 2, 3, 4, 7, 8, 10, and 11 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent Application Publication No. 2002/0063109 to Hayashizaki in view of U.S. Patent No. 6,451,143 to Nishi and Japanese Application Publication No. 07-164728 to Takakura et al. (Takakura).

Paragraph 6 of the Office Action indicates a rejection of claim 5 under 35 U.S.C. §103 as allegedly being unpatentable over Hayashizaki in view of Nishi and Takakura, and in further view of U.S. Patent No. 4,082,635 to Fritz et al. (Fritz).

Paragraph 7 of the Office Action indicates a rejection of claim 6 under 35 U.S.C. §103 as allegedly being unpatentable over Hayashizaki in view of Nishi and Takakura, and in further view of U.S. Patent No. 4,937,118 to Inagaki et al. (Inagaki).

Paragraph 8 of the Office Action indicates a rejection of claims 1-3 and 7-11 under 35 U.S.C. §103 as allegedly being unpatentable over Hayashizaki in view of Nishi and Takakura, and in further view U.S. Patent No. 6,196,738 to Shimizu et al. (Shimizu).

These rejections are traversed at least for the following reasons.

Claim 1 - Claim 1 is drawn to a method of producing a decorative molded object which is a resin molded object decorated with a color design image representing a letter, a symbol, a figure, or the like, comprising the steps of:

printing a color design image on an image carrying layer, which is composed of a porous material having, as a bonding phase, inorganic fine particles bound with each other with a binder resin and is arranged on a substrate sheet, with an output apparatus that collectively outputs color design data to form a coloring agent layer for displaying the color design image on the substrate sheet;

transferring the coloring agent layer on the substrate sheet onto a resin molded object to be decorated;

peeling the substrate sheet with the transferred coloring agent layer left on the resin molded object to form a color design image layer on the resin molded object; and

curing, after application and deposition onto the color design image layer, a transparent resin liquid to thereby form a transparent resin layer.

Claim 11 - Claim 11 is drawn to a method of producing a decorative molded object which is a resin molded object decorated with a color design image representing a letter, a symbol, a figure, or the like, comprising the steps of:

printing a color design image on an image carrying layer, which is composed of a porous material having, as a bonding phase, inorganic fine particles bound with each other with a binder resin and is arranged on a substrate sheet, with an output apparatus that collectively outputs color design data to form a coloring agent layer for displaying the color design image on the substrate sheet;

curing, after application and deposition onto the coloring agent layer, a transparent resin liquid to thereby form a transparent resin layer;

transferring the transparent resin layer and the coloring agent layer on the substrate sheet onto a resin molded object to be decorated; and

peeling the substrate sheet with the transferred coloring agent layer left on the resin molded object to form a color design image layer on the resin molded object.

Hayashizaki - Hayashizaki arguably teaches a key top and method for manufacture thereof that includes a transfer substrate 1 and a second transparent printed layer 2 (Hayashizaki at Figure 1(a)).

Hayashizaki arguably teaches a metalizing layer 3 and a first transparent printed layer 4, wherein the first transparent printed layer patterned as letters, numbers, symbols, pictures, and the like (Hayashizaki at Figure 1(c), paragraph [0009]).

However, Hayashizaki fails to disclose, teach, or suggest the second transparent printed layer 2 as being porous.

Furthermore, paragraph [0021] of Hayashizaki arguably provides that:

The term metalizing layer means a metal film formed by vapor deposition, sputtering, ion plating, electrolytic plating and the like. Among those methods, a vapor deposition method is typically used. No limitation is placed on the type of the metal, but aluminum is preferably used. The metalizing layer formed from aluminum has a silver color, but this color can be changed into a variety of colors by forming a colored transparent printed layer.

However, in paragraph [0021] of Hayashizaki, only a metalizing layer is described, whereby the term metalizing layer means a metal film formed by vapor deposition, sputtering, ion plating, electrolytic plating and the like. In this regard, it is clear that the metalizing layer is not porous and does not have a binder resin.

Thus, Hayashizaki fails to disclose, teach, or suggest printing a color design image on an image carrying layer, which is composed of a porous material having, as a bonding phase, inorganic fine particles bound with each other with a binder resin and is arranged on a substrate sheet, with an output apparatus that collectively outputs color design data to form a coloring agent layer for displaying the color design image on the substrate sheet..

Hayashizaki arguably teaches that upon completion of the transfer, as shown in FIG. 1(g), the transfer substrate 1 is removed which makes it possible to obtain a key top 7 with a transfer layer laminated thereon (Hayashizaki at Figure 1(g), paragraph [0034]).

However, Hayashizaki fails to disclose, teach, or suggest the application and deposition of a transparent resin liquid onto the backside of the second transparent printed layer 2 (Hayashizaki at Figure 1(g)). In this regard, the Office Action notes that Hayashizaki does not disclose curing a transparent resin layer (Office Action at page 5).

Thus, Hayashizaki fails to disclose, teach, or suggest curing, after application and deposition onto the color design image layer, a transparent resin liquid to thereby form a transparent resin layer.

The Office Action contends that Hayashizaki teaches the presence of porous areas (B) (Office Action at page 3).

While paragraph [0038] of Hayashizaki arguably teaches an empty symbol portion B, Hayashizaki fails to teach an empty symbol portion B as being an image carrying layer.

Within claim 3, the image carrying layer is perforated with many longitudinal pores opening in a direction perpendicular to a plane of the substrate sheet.

Regarding claim 3, the Office Action contends that Figure 2 of Hayashizaki teaches a colored layer with longitudinal openings (B) in a direction perpendicular to a plane of the transfer sheet (Office Action at page 5).

In response to this contention, paragraph [0033] of Hayashizaki arguably teaches that:

Then, as shown in FIG. 1(e), an adhesive is coated on the front surface of the first transparent printed layer 4 and an adhesive layer 5 is formed. As a result, a transfer material is produced in which a transfer layer is formed on the transfer substrate, this transfer layer consisting of four following layers: adhesive layer 5, first transparent printed layer 4, metalizing layer 3, and second transparent printed layer 2. The transfer material thus produced is stored upon winding into a roll and may be appropriately supplied to subsequent processing.

In this regard, Figures 1(g) and 2 of Hayashizaki arguably teach the empty symbol portion B as being filled with an adhesive 5.

Thus, Hayashizaki fails to disclose, teach, or suggest that the image carrying layer is perforated with many longitudinal pores opening in a direction perpendicular to a plane of the substrate sheet.

Nishi - Nishi arguably teaches a method for manufacturing key pad with rigid resin key top.

However, the Office Action fails to show where within Nishi is found the step of printing a color design image on an image carrying layer, which is porous and is arranged on a substrate sheet, with an output apparatus that collectively outputs color design data to form a coloring agent layer for displaying the color design image on the substrate sheet.

Moreover, Nishi arguably teaches that a UV reactive hardening resin (3045 supplied by Three Bond Co., Ltd.) 7 is applied to a key top adhesion portion 6 of the key pad 5 by screen printing method (Nishi at Figure 2, column 5, lines 18-21).

Nishi arguably teaches that graphic printing 9 is made with printing ink (Sericol 13 supplied by Teikoku Ink Co., Ltd.) on the back of a rigid resin key top 8 formed with translucent polycarbonate resin (Panlite L1 225L supplied by Teijin Kasei Co., Ltd.), then this rigid resin key top 8 and the key top adhesion portion 6 are adhered, and UV having main wavelength 365 nm is irradiated from the key pad side by the intensity of 1000 mW/cm² for 15 seconds to adhere them (Nishi at Figure 2, column 5, lines 21-28).

Nishi arguably teaches that if translucent resin is used as reactive hardening resin and at least a part of the rigid resin key top member is made of translucent member, it can naturally be composed to allow to recognize through them characters, numerals, symbols, pictures or the like realized on the key pad surface, graphics made by disposing light masking portion and cutting out characters, numerals, symbols, pictures or the like, the color or the others (Nishi at column 4, lines 12-18).

Nevertheless, the Office Action fails to show where within Nishi that there is to be found a transparent resin liquid.

Thus, the Office Action fails to show that the step of curing, after application and deposition onto the color design image layer, a transparent resin liquid to thereby form a transparent resin layer is found within Nishi.

Roget's New Millennium Thesaurus - The Office Action admits that Hayashizaki does not disclose curing a transparent resin layer (Office Action at page 3), printing a color layer (Office Action at page 4), or peeling the transfer sheet (Office Action at page 4).

The Office Action fails to show where within Nishi that there is to be found a **transparent resin liquid**. Instead, the Office Action refers to *Roget's New Millennium Thesaurus* for the terms "transparent" and "translucent" (Office Action at page 9).

In response to this reference, *Roget's New Millennium Thesaurus* has a copyright date of 2006, which is after the filing date for the above-identified application and is **unavailable as prior art**.

As a result, *Roget's New Millennium Thesaurus* fails to be dispositive regarding the terms "transparent" and "translucent".

Takakura - Takakura arguably teaches a transfer foil and production of plastic molded article having multi-color, light-transmitting open pattern.

Takakura arguably teaches the presences of a substrate sheet 1, a masking layer 2, and light-transmitting color layers 31, 32 (Takakura at Drawings).

However, Takakura fails to disclose, teach, or suggest light-transmitting color layers 31, 32 as being porous.

Thus, Takakura fails to disclose, teach, or suggest a step of printing a color design image on an image carrying layer, which is porous and is arranged on a substrate sheet, with an output apparatus that collectively outputs color design data to form a coloring agent layer for displaying the color design image on the substrate sheet.

Furthermore, Takakura fails to disclose, teach, or suggest the presence of a transparent resin liquid.

Thus, Takakura fails to disclose, teach, or suggest a step of curing, after application and deposition onto the color design image layer, a transparent resin liquid to thereby form a transparent resin layer.

Fritz, Inagaki and Shimizu fail to disclose, teach, or suggest a method of producing a decorative molded object.

Withdrawal of these rejections and allowance of the claims is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753 or the undersigned attorney at the below-listed number.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

Dated: September 28, 2006

Respectfully submitted,

By 

David T. Nikaido

Registration No.: 22,663

Brian K. Dutton

Registration No.: 47,255

RADER, FISHMAN & GRAUER PLLC

1233 20th Street, N.W.

Suite 501

Washington, DC 20036

(202) 955-3750

Attorneys for Applicant